

Fig. S1

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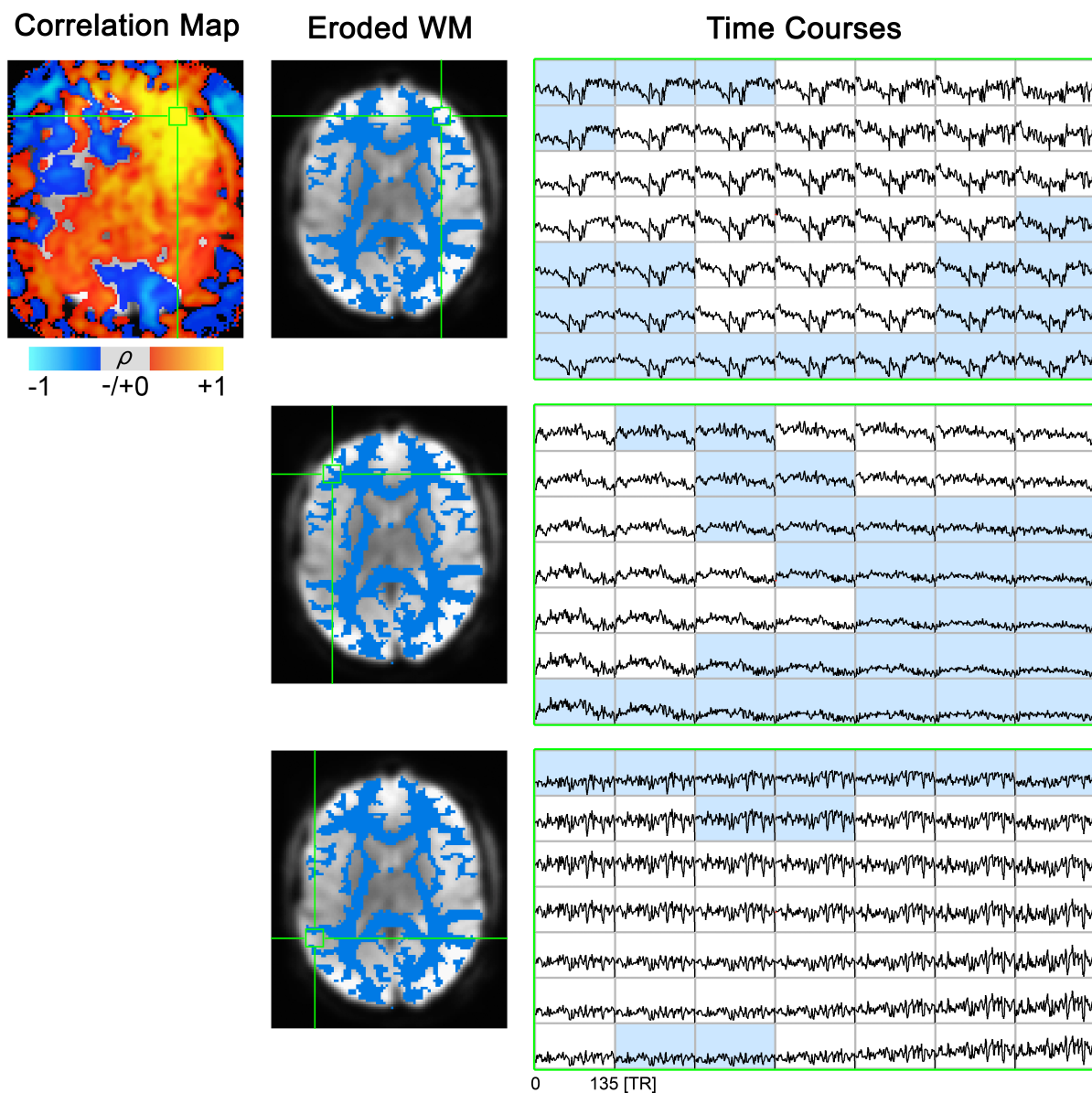


Fig. S1. A correlation map at a seed point in the RMFG and the temporal time courses around three different points (subject 2). The light blue tinted backgrounds of time course plots means that the time course in that graph is a time course at the voxel in the eroded WM mask colored in light blue in the WMe Mask column. The temporal pattern in the highlighted section of the motion corrected EPI time series to be quite uniform over a large spatial extent acrossing to tissue types. This figure supplements of Fig. 6.

Fig. S2

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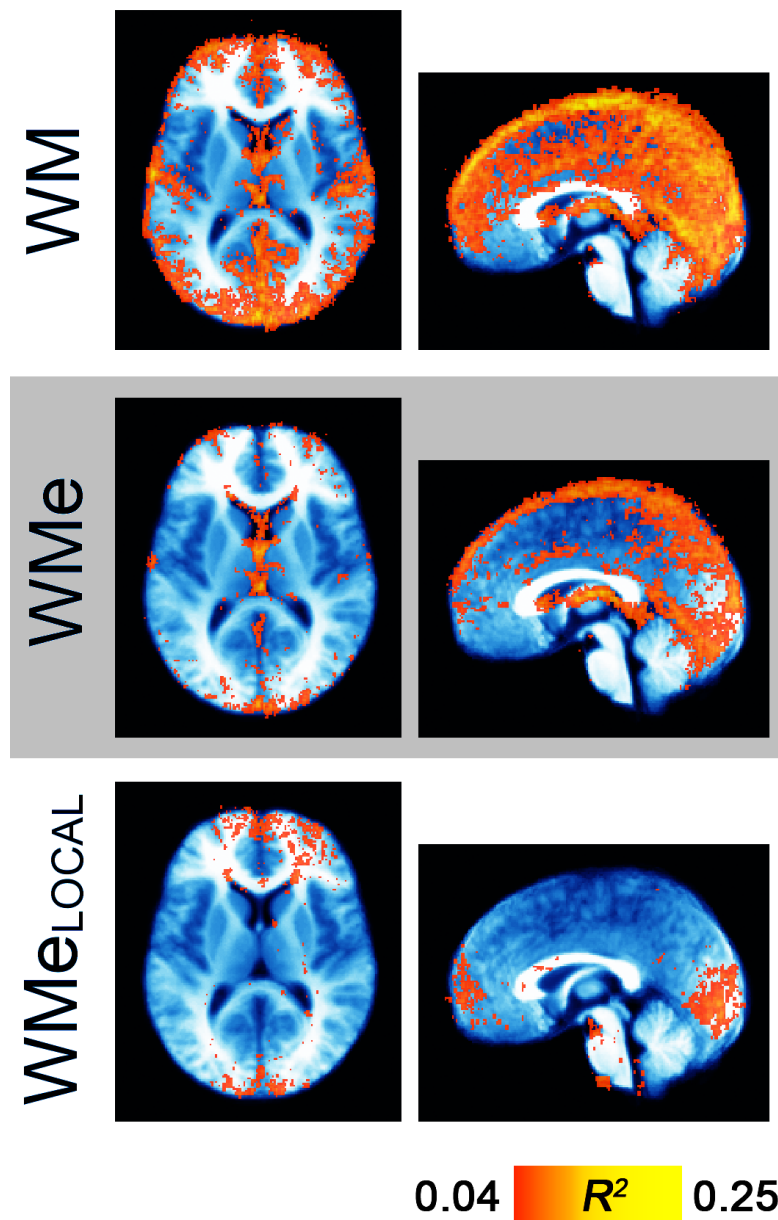


Fig. S2. Explained variances (R^2) maps of white matter related regressors to compare the marginal fitting performance of the regressors WM , WMe , and WMe_{LOCAL} without any other tissue-type-based regressors. The regression models for the first to third rows also include MO and RI regressors with each white matter related regressor, respectively. This is the supplementary figure for Figs. 3 and 5, to support the discussion section.

Fig. S3

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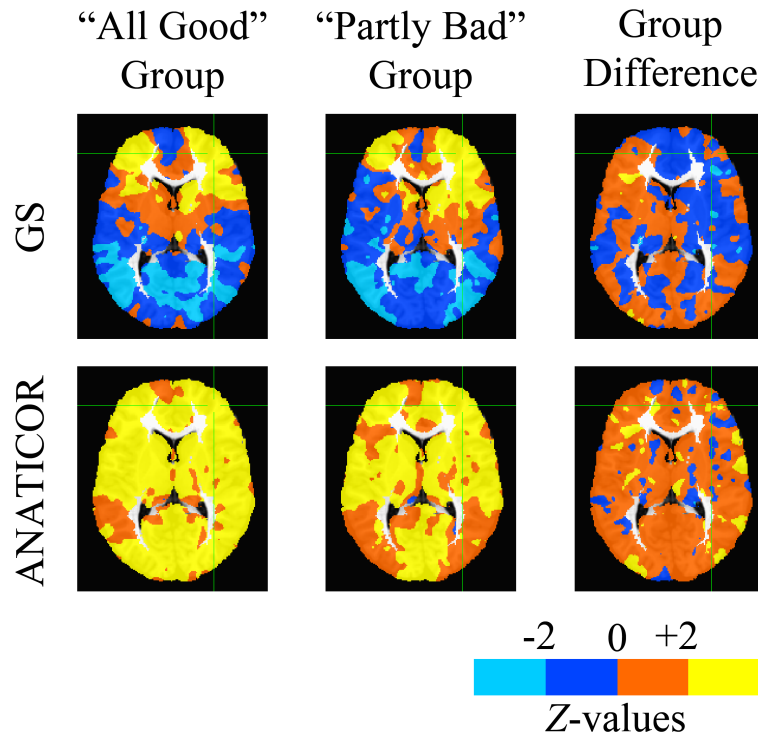


Fig. S3. The effect of coil artifacts in group analysis after GS and ANATICOR corrections. In other data sets acquired with the same equipment and protocols, but for another study, we chose twenty four subjects (twenty without the coil artifacts as detected by the R^2 of WM_{LOCAL} in ANATICOR, and four with artifacts in RMFG) to make two groups “All Good” and “Partly Bad”. The “All Good” group consists of twelve subjects without any large coil artifact, and the “Partly Bad” group consists of four and eight subjects, respectively, with and without the large coil artifact. GS and ANATICOR were applied to each group, and then the only GM voxels were smoothed with a 6 mm FWHM Gaussian kernel. The seed point for connectivity analysis is [35R, 47A, 10Z] in the RMFG of the N27 template space, and the other procedures are same as described in the main text. We performed a one sample t-test against the zero mean null hypothesis for each within-group analysis, and a two-sample t-test between “All Good” and

“Partly Bad” groups for GS and ANATICOR each. The “Partly Bad” group of GS showed higher positive statistical scores with a broader region at RMFG than at left MFG or those of the “All Good” group, and this spatially biased pattern is also reflected in the two sample t-test map. Both methods did not show any significant group difference between the two groups. For GS, however, the unthresholded pattern of group difference is spatially biased towards the region where the coil artifacts occurred. For ANATICOR, the spatial pattern of the group difference is more randomized and the biased pattern in RMFG is absent.

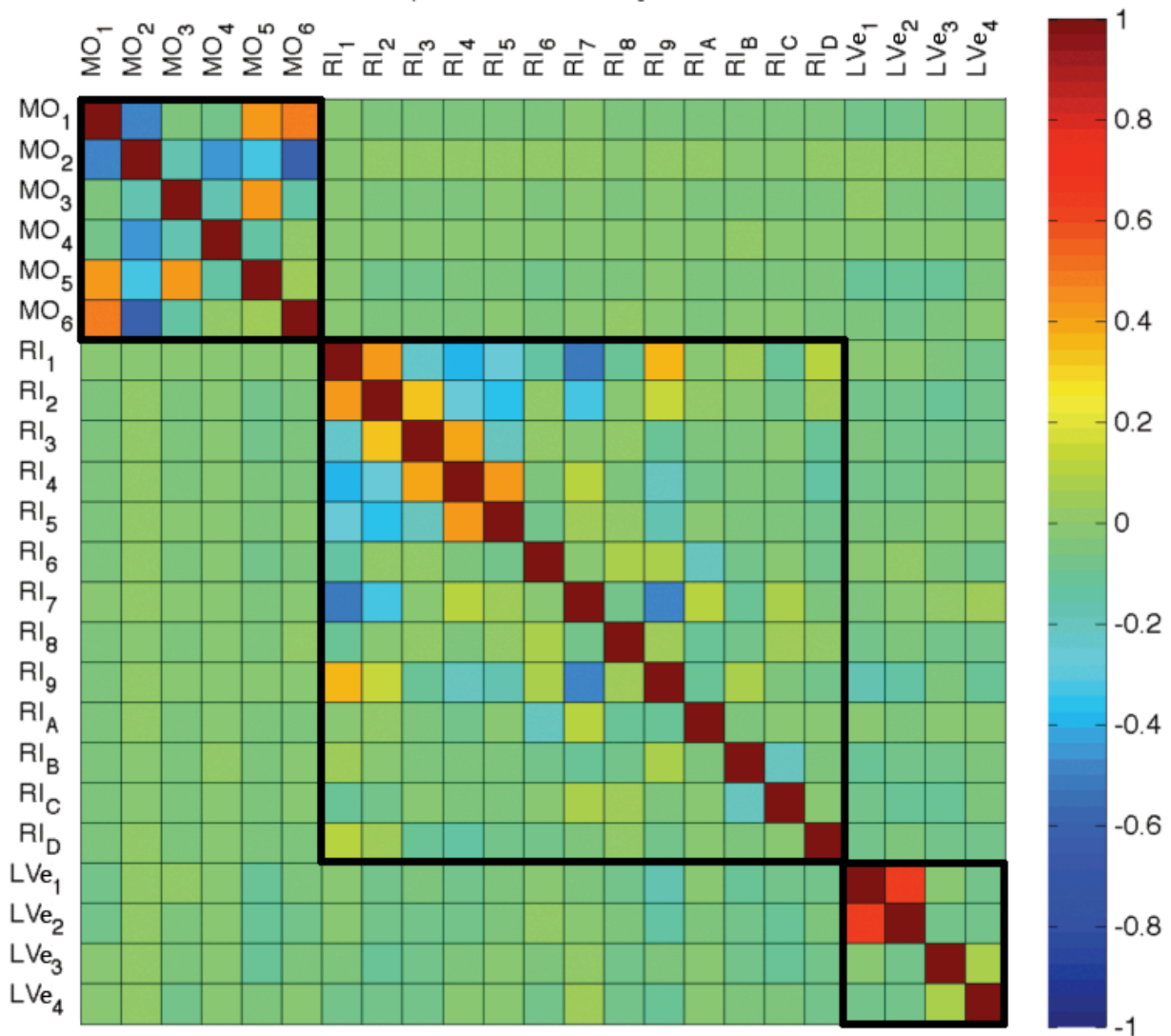


Fig. S4. Cross-correlation matrix between regressor groups having four or more regressors, averaged over all subjects. Correlations were higher amongst regressors of the same group, but not across groups. The highest correlation was between LVE_1 and LVE_2 .